WHAT IS CLAIMED IS:

1. A winding assembly for a rotor comprising:

at least one rotor field winding;

a winding support having a slot receiving said at least one winding;

wherein said winding assembly is mountable on said rotor.

2. A winding assembly as in claim 1 wherein said at least one rotor field winding is a plurality of windings and the winding support has a plurality of teeth and a plurality of slots between said teeth, and further each of said slots receives one of said plurality of windings.

3. A winding assembly as in claim 1 wherein said winding support includes at least one spacer, having edges that engage slots on at least one surface of the rotor, and said slots are transverse to a centerline of the rotor.

4. A winding assembly as in claim 3 wherein said at least one spacer has a quarter-disk shape, and has radial slots to receive said windings.

5. A winding assembly as in claim 4 wherein each of said plurality of rotor windings has a long side that fits into one of said radial slots of said spacer.

6. A winding assembly as in claim 3 wherein said winding assembly further comprises a locking bar engaging

a notch on an edge of said at least one spacer, and said locking bar slidably engages with a locking slot on said surface of the rotor, wherein said locking slot is parallel to said centerline of the rotor.

7. A winding assembly as in claim 1 wherein said winding support comprises a plurality of winding supports distributed along opposite sides of said plurality of windings.

8. A winding assembly as in claim 7 wherein said opposite sides of said plurality of windings are mountable to encircle a rotor core section, said at least one surface of said rotor core includes opposite surfaces of the rotor core section, and said spacers are collectively engageable with both of said opposite surfaces of the rotor core section to secure the winding assembly to the rotor core section.

9. A winding assembly for a rotor core comprising:

an array of field windings arranged in an array, each of said windings having a pair of opposite long sides, and a pair of opposite end sections;

a plurality of winding spacers supporting the long sides of said field windings, said winding spacers each having a first edge and a second edge,

wherein each of said first edges slidably engage a respective spacer slot on a first surface of the rotor core, and each of said second edges engage a respective spacer slot on a second surface of the rotor core.

10. A winding assembly as in claim 9 wherein the first surface of the rotor core is orthogonal to the second surface of the rotor core.

11. A winding assembly as in claim 9 wherein the first surface of the rotor core has a locking slot transverse to the spacer slots on the first surface, and said assembly further comprises a locking bar slidably engaging the locking slot.

12. A winding assembly as in claim 11 wherein said locking bar engages a notch on an edge of said at least one spacer, and said locking slot is parallel to a centerline of the rotor.

13. A winding assembly as in claim 9 wherein each of said plurality of rotor windings is seated in a respective slot of each spacer, and the spacer slots are radially aligned with the rotor core.

14. A winding assembly as in claim 9 wherein said plurality of windings are mountable to encircle a rotor core section, said at least one surface of said rotor core includes opposite surfaces of the rotor core section, and said spacers are collectively engageable with both of said opposite surfaces of the rotor core section to secure the winding assembly to the rotor core section, and wherein said end sections of the windings extend laterally beyond the rotor core.

15. A method of assembling a plurality of field windings and securing the windings on a rotor core comprising the steps of:

a. arranging a plurality of field windings in a winding assembly using a plurality of spacers to hold the windings in the assembly, wherein each spacer has a plurality of slots and each slot receives one of said plurality of rotor windings;

b. mounting the winding assembly on the rotor core by inserting edges of the plurality of spacers into slots on the rotor core, and

c. securing the edges of the plurality of spacers to the rotor core.

16. A method as in claim 15 wherein said winding assembly is mounted on the rotor core by moving the assembly along a Q-axis of the rotor core, and aligning a section of the rotor core with a center open aperture of the assembly.

17. A method as in claim 15 wherein the edges of the plurality of spacers are secured to the core by a locking bar that slidably engages a notch on one of said edges of the spacers and a locking slot on the rotor.